

****11/4/03 DRAFT****

**Fire Regime Condition Class (FRCC) Interagency Handbook
Reference Conditions**

Modeler: Wendel Hann

Date: 9/25/03

PNVG Code: DSHB3

Potential Natural Vegetation Group: Desert Shrubland With Grasses and Trees

Geographic Area: Occurs in the Southwest, Southern Great Plains, Colorado Plateau, and Great Basin and scattered within the Southern Rocky Mts.

Description: This type typically occurs in foothills where plains, valleys, and playas transition to foothills landforms. Vegetation is shrubland dominated by blackbrush, creosote bush, tarbush, mormon tea, sand sage, three awn, tobosa grass, galleta grass, and black grama with intermingled forbs. Within the natural disturbance and succession regime trees (pinyon, juniper, long needle pines) are a minor component (less than 5%) of this type, typically occurring on rock outcrops or edges of steep draws and ravines. However, if fire is substantially reduced or excluded trees will encroach and substantially increase. This type correlates with Kuchler's (1964) types 39, 44, 57, and 58.

Fire Regime Description: Fire regime group III, infrequent mixed. The mean fire interval is about 40 years with moderate variation due to year to year variation in grass production related to drought and moisture cycles. Fire years are typically correlated with high spring moisture years in geographic areas dominated by cool season moisture and high summer moisture in areas dominated by monsoon season rains. Fire years often occur when these higher moisture years follow several years of drought. Grazing of the grassy fuels by large ungulates increases the variation of the fire interval.

Vegetation Type and Structure of Fire Regime Group II

Class	Percent of Landscape	Description
A: post replacement	7	Dominated by resprouts and seedlings of shrubs and grasses and post-fire associated forbs. This type typically occurs where fires burn relatively hot in classes B and C.
B: mid-development closed	25	Greater than 15 percent shrub cover and 20-40 percent grass and forb cover; generally associated with more productive soils. Effects of cumulative drought can cause a shift from this class to class C.
C: mid- open	65	Less than 15 percent shrub cover and less

		than 20 percent grass and forb cover generally associated with less productive cobbly and gravelly soils. Effects of cumulative drought can cause a shift from class B to this class.
D: late- open	2	5-15 percent cover of mature pinyon, juniper, mesquite, and other tree and tall shrub species; typically associated with rock outcrops or draws that protect the trees and tall shrubs from fire.
E: late- closed	1	Greater than 15 percent cover of pinyon, juniper, mesquite, and other tree and tall shrub species; typically have multiple layers with young ingrowth and thick litter/duff accumulation; often associated with small areas that escape 1-3 fire cycles because of terrain; typically occurs on the more productive soils; can become somewhat fire resistant as a result of dense shade over thick litter, but during dry years when this type burns it burns very hot.
Total	100	

Fire Frequency and Severity			
Fire Frequency-Severity	Modeled Probability	Percent , All Fires	Description
Replacement Fire	.015	60	Replacement fires in B and C
Non-Replacement Fire	.010	40	Mosaic fires in classes B and C
All Fire Frequency*	.025	100	40 year mean fire frequency with high variation due to complex interaction of drought cycles and herbivory

*Sum of replacement fire and non-replacement fire probabilities.

References

- Brown, James K.; Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p.
- Kuchler, A. W. 1964. Manual to accompany the map of potential natural vegetation of the conterminous United States. American Geographical Society. Spec. Publ. No. 36. Lib. Congress Cat. Card Num. 64-15417. 156 p.
- Schmidt, Kirsten M, Menakis, James P., Hardy, Colin C., Hann, Wendel J., Bunnell, David L. 2002. Development of coarse-scale spatial data for wildland fire

and fuel management. Gen. Tech. Rep. RMRS-GTR-87. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 41 p. + CD.

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MODELER FIELD REVIEWS: *SPECIFIC LOCN
Wendel Hann - New Mexico 2003.

VDDT Results



